

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 20

UNITED STATES PATENT AND TRADEMARK OFFICE

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Ex parte DAVID S. BREED,
WILBUR E. DUVALL
and WENDELL C. JOHNSON

Appeal No. 2002-0029
Application No. 09/437,535

ON BRIEF

MAILED

FEB 26 2003

**PAT. & T.M. OFFICE
BOARD OF PATENT APPEALS
AND INTERFERENCES**

Before COHEN, FRANKFORT, and STAAB, Administrative Patent Judges.
STAAB, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1-3, 7, 8, 10-12, 16-22, 24, 25, 28-30, 32, 33 and 36-40. Claims 4-6, 9, 13-15, 23, 26, 27, 31, 34 and 35, the only other claims pending in the application, have been indicated by the examiner as being allowable if rewritten in independent form. The amendment filed subsequent to the final rejection has been entered.

Appellants' invention pertains to a method and apparatus for controlling deployment of a side airbag.

The references relied upon by the examiner in the final rejection are:

White et al. (White)	5,071,160	Dec. 10, 1991
Kaji et. al. (Kaji)	5,222,761	Jun. 29, 1993

The appealed claims stand finally rejected as follows:¹

(1) claims 20-22, 24, 25, 28-30, 32 and 33, rejected under 35 U.S.C. § 102(b) as being anticipated by Kaji;

(2) claims 20-22, 24, 25, 28-30, 32 and 33, rejected under 35 U.S.C. § 103(a) as being unpatentable over White; and

(3) claims 1-3, 7, 8, 10-12, 16-19 and 36-40, rejected under 35 U.S.C. § 103(a) as being unpatentable over Kaji in view of White.

Reference is made to appellants' main and reply briefs (Paper Nos. 13 and 15) and to the examiner's final rejection and answer (Paper Nos. 9 and 14) for the respective positions of appellants and the examiner regarding the merits of these rejections.

¹Although the examiner grouped rejections (1) and (2) in a single paragraph in the final rejection and answer, it is clear that claims 20-22, 24, 25, 28-30, 32 and 33 have been finally rejected on two separate grounds of rejection.

Preliminary Matters

At the outset, we observe that in responding to appellants' arguments in the "Response to Argument" section of the answer, the examiner appears to take the position that rejections (1) and (2) are based on the combined teachings of Kaji and White. This apparent shift of position on the examiner's part prompted a reply brief from appellants wherein they questioned whether rejections (1) and (2) had been withdrawn in favor of a new rejection of claims 20-22, 24, 25, 28-30, 32 and 33 based on the combination of Kaji and White. In Paper No. 16, the examiner stated that the answer contained a typographical error and that the rejections of claims 20-22, 24, 25, 28-30, 32 and 33 remain as stated in the final rejection. Accordingly, we consider rejection (1) to be an anticipation rejection under § 102(b) based solely on Kaji, and rejection (2) to be an obviousness rejection under § 103(a) based solely on White.

Rejection (1)

Independent claims 20 and 28, as well as claims 21, 22, 24, 25, 29, 30, 32 and 33 that depend therefrom, stand rejected under 35 U.S.C. § 102(b) as being anticipated by Kaji.

Independent claim 20 is directed to a method for controlling deployment of a side airbag and includes the step of determining the position of at least a part of the occupant, and the step of controlling deployment of the side airbag based on the determined position of the at least one part of the occupant.

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Independent claim 28 is directed to a method for controlling deployment of a side airbag and includes the step of determining whether an occupant is present in the seat, and the step of controlling deployment of the side airbag based on the presence or absence of an occupant in the seat.

The examiner's rejection of these claims as being anticipated by Kaji appears to be based on the examiner's position, as stated on page 5 of the final rejection, that the apparatus of Kaji, in its normal and usual operation, would necessarily perform the claimed method. We agree with appellants, however, that there is no basis for concluding that operating the apparatus of Kaji in its normal and usual manner would result in the step of determining the position of at least a part of an occupant, as called for in independent claim 20, or the step of determining whether an occupant is present in the seat, as called for in independent claim 28.

For this reason, the standing rejection of claims 20-22, 24, 25, 28-30, 32 and 33 as being anticipated by Kaji cannot be sustained.

Rejection (2)

Claims 20-22, 24, 25, 28-30, 32 and 33 stand further rejected under 35 U.S.C. § 103(a) as being unpatentable over White.

In this instance, the examiner maintains (final rejection, pages 5-6) that it would have been obvious to one having ordinary skill in the art to modify White "to include the claimed method," and that "[b]ecause the prior art discloses all the structure necessary

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to perform the claimed functions, one of ordinary skill in the art would find the claimed method to be an obvious step in light of the disclosed structure."

The initial burden of establishing a basis for denying patentability to a claimed invention rests upon the examiner. In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984). In establishing a prima facie case of obviousness under 35 U.S.C. 103, it is incumbent upon the examiner to provide a reason why one of ordinary skill in the art would have been led to modify the prior art reference or to combine reference teachings to arrive at the claimed invention. Ex parte Clapp, 227 USPQ 972, 973 (BPAI 1985). To this end, the requisite motivation must stem from some teaching, suggestion or inference in the prior art as a whole or from the knowledge generally available to one of ordinary skill in the art and not from appellants' disclosure. See, for example, Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1052, 5 USPQ2d 1434, 1439 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988).

In the present case, the examiner has failed to point out any teaching, suggestion or inference in the prior art, or knowledge generally available to one of ordinary skill in the art to support the conclusion that the claimed subject matter as a whole would have been obvious to one of ordinary skill in the art. Thus, the examiner has failed to meet the examiner's initial burden of establishing a prima facie case of obviousness. For this reason alone the standing rejection of claims 20-22, 24, 25, 28-30, 32 and 33 as being unpatentable over White cannot be sustained.

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Rejection (3)

Looking first at the rejection of claim 1 as being unpatentable over Kaji in view of White, the examiner acknowledges that Kaji does not disclose determining means for determining the position of the occupant or a control circuit coupled to the determining means for controlling the deployment of the side airbags based on the determined position of the occupant. Nevertheless, the examiner considers (final rejection, pages 3-4) that it would have been obvious to one of ordinary skill in the art to provide Kaji with such determining means and control circuit to control deployment of Kaji's side airbag in view of the teachings of White. For the following reasons, we find the examiner's reliance on White in this regard to be well founded.

White pertains to a circuit for actuating a vehicle passenger safety restraint such as an airbag, said circuit including pressure transducers and ultrasonic acoustic sensors for sensing the presence, weight and relative position of the passenger within a vehicle, which information is supplied to a control module controlling operation of the restraint (abstract). The control circuit operates in a number of ways, including "inhibiting operation of the restraint if the likely injury attendant to operation of the restraint is greater than the likely injury attendant to unimpeded passenger contact with fixed interior structure of the vehicle, given the position assumed by the passenger therein" (column 3, lines 2-7). See also, column 1, lines 23-27, the paragraph spanning columns 1 and 2, and column 3, lines 45-52. It would have been obvious to provide

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determining means and control circuit means of the type disclosed by White in the airbag restraint system of Kaji for controlling deployment of Kaji's side airbags based on the position of the occupant in order to gain the benefit of optimizing protection of the occupant as taught by White at, for example, column 3, lines 17-26.

In that the proposed modification of Kaji in view of White would result in the subject matter of claim 1, we will sustain the standing § 103(a) rejection thereof as being unpatentable over Kaji in view of White. We will also sustain the standing § 103(a) rejection of dependent claims 2, 3 and 8 since appellants state on page 4 of the main brief that claims 1-3 and 8 stand or fall together.

In arriving at this conclusion, we have carefully considered appellants' argument on pages 9-10 of the main brief that it would not have been obvious to modify the side airbag system of Kaji in the manner proposed in view of White's front airbag restraint system because the main objectives of a position determining system for use in deploying front airbags and side airbags are different. Specifically, appellants assert that the overriding concern of White's front airbag system is to determine the rate at which the passenger must be decelerated relative to fixed interior structures by the restraint system to prevent injurious contact therewith, whereas in side airbag systems like that of Kaji the most significant problem associated with deployment of the airbag is when a passenger is leaning against the deployment door of the airbag, in which case deployment of the airbag at high velocity can exert a large force on the passenger

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causing significant injury. The problem with this argument is that it does not take into account the teaching of White (see, for example, column 3, lines 2-7) that deployment of the airbag may be inhibited if the position of the passenger is such that deployment would cause greater injury than the likely injury attendant to unimpeded passenger contact with fixed interior structures. In other words, White's system is designed to inhibit deployment of the airbag if the passenger is so close to the airbag that deployment would likely cause more harm than good.

Turning to claim 10, we are also in agreement with the examiner that it also would have been obvious to provide determining means and control circuit means of the type disclosed by White in the airbag restraint system of Kaji for controlling deployment of Kaji's side airbags based on the presence of the occupant. Suggestion for this is provided in White at column 1, lines 13-17, wherein the sensing means is stated to include means for sensing the size, position and presence of a passenger for the purpose of, among other things, inhibiting operation of the airbag. Clearly, inhibiting operation of the airbag based on whether or not a passenger is present would be desirable in both White's front airbag system and Kaji's side airbag system in order to prevent needless deployment of the airbag when no one is present in the adjacent seat.

Accordingly, we will sustain the standing § 103(a) rejection of claim 10 as being unpatentable over Kaji in view of White. We will also sustain the standing § 103(a)

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rejection of dependent claims 11, 12 and 17-19 since appellants state on page 4 of the main brief that claims 10-12 and 17-19 stand or fall together.

Claim 7 depends from claim 2 and further requires that the receiver of the determining means is mounted in the door of the vehicle. Bearing in mind that it is skill in the art, rather than the converse, which we are to presume (In re Sovish, 769 F.2d 738, 743, 226 USPQ 771, 774 (Fed. Cir. 1985)), we conclude that this arrangement would have been further obvious to one of ordinary skill in the art based in the combined teachings of Kaji and White in that it would logically flow that the receiver should be located in close proximity to the door mounted side airbag of Kaji in order to accurately determine the position of the passenger relative to the airbag. Appellants' argument to the contrary on page 10 of the main brief is not well taken because it fails to take into account that the rejection is based on the combined teachings of the applied references and not merely the teachings of White alone. We therefore will sustain the standing § 103(a) rejection of dependent claim 7, as well as dependent claims 16, 37 and 38, which stand or fall with claim 7.

The rejection of method claim 36 as being unpatentable over Kaji in view of White also will be sustained. Claim 36 depends from method claim 28 and sets forth a method of controlling deployment of a side airbag based on both the presence or absence of an occupant (claim 28) and the position of a part of the occupant (claim 36). Based on White's teaching at column 1, lines 15-27, that the control circuit thereof

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includes means for sensing the presence and position of passengers, and that this information is used to, among other things, inhibit operation of the restraint, we consider that the method of claim 36 would flow as a natural consequence from the normal usage of the modified Kaji device. Compare, In re King, 801 F.2d 1324, 1326, 231 USPQ 136, 138 (Fed. Cir. 1986).

We will sustain the § 103(a) rejection of claim 39 as being unpatentable over Kaji in view of White. White's ultrasonic acoustic sensor 26 for sensing the position assumed by the passenger is disclosed as including a transmitter and a detector (column 4, lines 42-44). For the reasons set forth above in our discussion of claim 7, it logically flows from the combined teachings of the applied references that at least the detector component of the sensor should be located in close proximity to the door mounted side airbag in applying the teachings of White in Kaji.

We also will sustain the § 103(a) rejection of claim 40. The only argument made by appellants specifically directed to this claim is found on page 10 of the main brief, wherein appellants assert that White does not teach or suggest at least two cooperating components to determine whether an occupant is present in the seat; however, we view the sensor 24 of White for sensing the presence of a passenger in conjunction with its wiring for transmitting the sensor signal to the control module 36 as comprising at least two cooperating components arranged to provide a signal indicative of an occupant's

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presence. Accordingly, as argued, we will also sustain the § 103(a) rejection of claim 40 based on the combination of Kaji and White.

Remand

This case is remanded to the examiner for the following reasons.

In light of our affirmance of the standing § 103(a) rejection of claims 1-3, 7, 8, 10-12, 16-19 and 36-40, the examiner should consider whether any of claims 20-22, 24, 25, 28-30, 32 and 33 are unpatentable over prior art of which the examiner is aware, and in particular the teachings of Kaji and White.

In addition, the examiner should also consider whether any of claims 4-6, 9, 13-15, 23, 26, 27, 31, 34 and 35, indicated by the examiner as being allowable if rewritten in independent form, are unpatentable over prior art of which the examiner is aware, and in particular the teachings of Kaji and White. For example, the additional limitation of claim 9, which depends from claim 1, appears to be met by White's control circuit when it inhibits deployment of the airbag (column 1, lines 23-27).

Summary

The rejection of claims 20-22, 24, 25, 28-30, 32 and 33 as being anticipated by Kaji is reversed.

The rejection of claims 20-22, 24, 25, 28-30, 32 and 33 as being unpatentable over White is reversed.

The rejection of claims 1-3, 7, 8, 10-12, 16-19 and 36-40 is affirmed.

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This case is also remanded to the examiner for consideration of the matters noted above.

The decision of the examiner is affirmed-in-part.

In addition to affirming the examiner's rejection of one or more claims, this decision contains a remand. 37 CFR § 1.196(e) provides that

whenever a decision of the Board of Patent Appeals and Interferences includes or allows a remand, that decision shall not be considered a final decision. When appropriate, upon conclusion of proceedings on remand before the examiner, the Board of Patent Appeals and Interferences may enter an order otherwise making its decision final.

Regarding any affirmed rejection, 37 CFR § 1.196(b) provides:

Appellant may file a single request for rehearing within two months from the date of the original decision. . . .

The effective date of the affirmance in this case is deferred until conclusion of the proceedings before the examiner unless, as a mere incident to the limited proceedings, the affirmed rejection is overcome. If the proceedings before the examiner does not result in allowance of the application, abandonment or a second appeal, this case should be returned to the Board of Patent Appeals and Interferences for final action on the affirmed rejection, including any timely request for rehearing thereof.

This application, by virtue of its "special" status, requires immediate action, see MPEP § 708.01.

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AFFIRMED-IN-PART, REMANDED

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